

Fluorescent lights / mercury-containing lamps (universal waste)

Virginia previously incorporated language in Part XVI of the hazardous waste management regulations that included mercury-containing lamps as a state-declared universal waste. Amendment 15 of the hazardous waste regulations, Section 9 VAC 20-60-273, incorporates the federal universal waste rule language by reference. Virginia included mercury containing lamps as a state-declared universal waste prior to the adoption of federal standards. General management requirements for these universal wastes (both small quantity handlers and large quantity handlers) are in accordance with the federal requirements as adopted by reference in 9 VAC 20-60-273, with certain additional provisions included from the previous Virginia regulations.

EPA's main objective in passing the universal waste rule was to [encourage the recycling](#) of universal wastes by making it easier for universal waste handlers to collect these items, allowing for longer storage of these wastes and providing for reduced recordkeeping. Mercury containing lamp recycling is a practical and feasible manner in which to manage these lamps, in addition to being a more environmentally friendly option than disposal. Recycling of mercury containing lamps is the Virginia Department of Environmental Quality's preferred method of management for this waste stream.

Please note that, contaminated residues, and other mercury-containing wastes not meeting the criteria of 9 VAC 20-60-273 are potentially subject to full regulation as hazardous waste.

Mercury-containing Lamp Crushing

To encourage recycling and reclamation of mercury containing bulbs, Virginia does recognize and allow the use of bulb crushing devices meeting certain standards of operations. Crushed bulb residues may be managed as a universal waste under these regulations. Please note, universal waste handlers that crush mercury-containing lamps for size reduction may only do so at the site of generation and must comply with all applicable requirements of 9 VAC 20-60-273. Please refer to the regulations for the specific language.

In general the requirements for bulb crusher operation specify that the crushers must be operated indoors, be equipped with pollution control devices (HEPA, activated charcoal etc.), and they must be certified that they will meet certain OSHA standards. The facility must develop a written procedure for their operation. Routine maintenance, operation, and filter changes must be in accordance with the manufacturer's directions, a logbook verifying their operation and maintenance must be maintained, and operators must be trained to operate them correctly.

Additionally, the handler must store the crushed lamps in closed, non-leaking drums or containers that are in good condition. Transfer of the crushed lamps to other drums or containers is not permitted. For generators sending their lamps to universal waste handlers or destination facilities in other states -- as long as the receiving state recognizes the facility as a proper universal waste handler/destination facility within its regulatory scope, Virginia DEQ will also accept such facilities as proper receiving facilities for crushed universal waste lamps. DEQ does not at present have information about facilities operating in other states, nor does DEQ maintain a list of "approved" facilities. Virginia generators managing their waste through facilities operating in other states are encouraged to contact the corresponding state agency for information on the facility's regulatory status. If receiving states will not accept crushed lamps as a universal waste, the generator would be required to label and manifest in accordance with the receiving state's requirements at the time of off-site shipment.

Low Mercury Lamps

Several manufacturers have developed products marketed as "low mercury" lamps, and generally substantiate this claim by stating that they do not fail the TCLP characteristic for hazardous waste. DEQ does not specifically endorse any manufacturer's claim, but recognizes that many manufacturers provide this information to their customers in support of their low mercury lamp products. Generators may use the manufacturer's claim to support a knowledge-based waste characterization determination. Ultimately, any waste management liability on the part of the generator would depend on the accuracy of the manufacturer's claim and the generator's subsequent reliance on that information in making their waste characterization decision. We have found that most manufacturers making this claim have substantial data to demonstrate their conclusions. However, please bear in mind that their data is specific only to their products; any aggregate waste stream may differ if it contains other lamps.

As a "best management practices" policy, Virginia DEQ encourages generators to manage all mercury containing lamps under the provisions of the Universal Waste Rule. Even though these lamps may be

managed as a non-hazardous waste if they do not fail TCLP and would be acceptable for landfill disposal, DEQ strongly recommends that generators of substantial quantities of them recycle them as a Universal Waste. We believe this prudent and environmentally responsible position will not only ensure future longevity of our landfills but will also minimize possible load rejection by landfill operators and potential calls for legislation for an outright ban on all fluorescent lamp disposal in landfills, with consequent higher management costs for all.

Resources

- The Pollution Prevention group within Virginia DEQ has put together a number of resources with respect to fluorescent lamp recycling that can be found by going to the following web site:
 - <http://www.deq.virginia.gov/Programs/PollutionPrevention/MercuryReduction/Fluorescents.aspx>
- This site includes information for commercial property managers, a discussion of why lamp recycling is the right management decision for your business, your workers and the environment, and the environmental benefits of using fluorescent lamps. Additionally, the site provides information about picking a good lamp recycling vendor and a list of vendors that provide lamp recycling services to Virginia which can be found at the following web site:
 - <http://www.deq.virginia.gov/Programs/PollutionPrevention/MercuryReduction/Fluorescents/LampRecyclingVendors.aspx>.

Click on the link for "list of vendors" at the bottom of the page to access the list.